

## **Remarks**

### **1. Summary of Office Action**

In the Office Action mailed May 21, 2007, the Examiner objected to an inadvertent mis-numbering of claims that resulted in two claims numbered “25.” The Examiner also rejected claims 1-33 under 35 U.S.C. § 102(a) as allegedly being anticipated by U.S. Patent No. 6,587,684 (Hsu).

### **2. Status of the Specification**

Applicants have corrected a minor typographical error in the original specification in the paragraph at page 11, lines 3-10. Specifically, at line 4, the missing word “are” was entered. Applicants have also corrected a minor typographical error in the original specification in the paragraph at page 12, lines 11-17. Specifically, a line 13, the word “truck” was replaced by the word “trunk.” No new matter has been entered by way of either of these corrections.

### **3. Status of the Claims**

Presently pending are claims 1-34, of which claims 1, 11, 12, 16, 26, and 29 are independent, and the remainder are dependent. Additionally, claim 34 is new. Various claims have been amended as follows.

Applicants have amended each of the independent claims (claims 1, 11, 12, 16, 26, and 29) to include, in one way or another, a limitation specifying that the interworking function operates to connect two different types of data call. Namely, (i) a type between a client terminal and a device in a packet-data network, and (ii) a type between the client terminal and a device in a Public Switched Telephone Network. This limitation incorporates into each claim a dual functionality of the interworking function with regard to the types of data calls that it supports. Applicants have also amended each of the independent claims to recite, in one way or another,

that both signaling of both types of data call and bearer data for both types of that are transmitted on an Ethernet link that connects the wireless switch with the interworking function.

Support for these amendments may be found in Figures 3 and 4, and on page 8, lines 4-9, for example. No new matter has been added.

Applicants have also amended claims 4, 15, 17, 21, 22, 23, 25, and 30, each of which depends from one of the independent claims. In all cases, the amendments to these dependent claims have been made to introduce proper antecedent basis with respect to the amended parent claims. No new matter has been added.

As noted, an inadvertent mis-numbering of the original claims resulted in two claims numbered “25.” Applicants have cancelled the second “claim 25” and re-introduced it (with proper antecedent basis with respect to its amended parent claim) as new claim 34.

#### **4. Response to Objections**

The Examiner objected to an informality in which the mis-numbering of claims resulted in two claims numbered “25.” The Examiner referred to the second “claim 25” as claim “25(b)” in subsequent discussions in the present Office Action. As described above, Applicants, by way of amendments, have cancelled the second “claim 25” (i.e., claim “25(b)”) and re-introduced it as new claim 34. These amendments correct the mis-numbering, as required by the Examiner. Applicants respectfully request that the Examiner withdraw the objections to claim 25.

#### **5. Response to Rejections under 35 U.S.C. § 102(a)**

As noted, the Examiner rejected claims 1-33 under 35 U.S.C. § 102(a) as allegedly being anticipated by Hsu. Applicants respectively traverse. Under M.P.E.P. § 2131, a claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference. Applicants submit that Hsu fails to teach

each and every element set forth in any of claims 1-33, or of new claim 34.

**Hsu does not teach an interworking function that connects “data calls of both (i) a type between a client terminal and a device in a packet-data network and (ii) a type between the client terminal and a device in a Public Switched Telephone Network.”**

As described above, each of Applicants’ independent claims (claims 1, 11, 12, 16, 26, and 29), as amended, expressly recite, in one way or another, a limitation specifying that the interworking function operates to connect “data calls of both (i) a type between a client terminal and a device in a packet-data network and (ii) a type between the client terminal and a device in a Public Switched Telephone Network.” In their specification (e.g., background section), Applicants explain that both types of data connections are still supported in some wireless networks in which 3G and 2G technologies coexist, for instance. An interworking function that connects both types of data call therefore offers advantages in these as well as other types of networks.

In contrast, Hsu teaches an interworking function (IWF) that supports a data connection between a digital telephone and packet network, wherein the data connection is *not* made by way of a PSTN. Rather, both the digital telephone and the IWF taught by Hsu implement peer network and data link layer protocols, such as TCP/IP. For example, in column 6, lines 21-46, Hsu describes how a system (depicted in Figure 1 of Hsu) supports such a data connection. In particular, Hsu teaches that an IWF “is configured for establishing a 2-way communication link with the digital telephone according to a prescribed network layer protocol, such as TCP/IP protocol.” And later in the same paragraph, the IWF “recovers the TCP/IP messages from the CDMA packets... and transmits the TCP/IP messages to the data proxy gateway...” Hsu does not teach connecting to a PSTN, nor incorporation in the IWF of packet-to-PSTN translation.

The emphasis in Hsu on making a data connection without needing to pass through the PSTN is further evident from Figure 2 and the related discussion in column 8, line 29 – column 9, line 25. In particular, Hsu teaches (column 9, lines 21-27) “[w]hereas digital telephones to date have served as modems for computers that connected to networks, the present invention uses the digital telephone to directly interact, as a host, to servers on a packet switched network. Hence, the digital telephone 16 is configured to support network transport protocols, such as TCP/IP.”

Thus, while the IWF in Hsu functions to connect the digital telephone with a data proxy gateway in the packet network, the path between the digital telephone and the data proxy gateway in Hsu does not include a connection to the PSTN. Correspondingly, Hsu does not teach modems or modem processing in the IWF or anywhere else in the path. Indeed, the specific purpose of the arrangement taught by Hsu is to avoid the scenario in which the digital telephone acts as a modem for facilitating a data connection by way of the PSTN, a scenario that would require the IWF to incorporate modems.

Moreover, while Hsu discloses (column 2, lines 63-65) that “an Interworking Function (IWF) that converts the data from the wireless data protocol to a format compatible for the public switched telephone network (PSTN)” is background art to the his invention, it is clear that obviating the need to connect via the PSTN is seen by Hsu as an advance over the disclosed prior art. This can be seen, for example, at column 2, lines 26-28, and column 7, line 62 – column 8, line 9, as well as column 9, lines 21-27 (already cited above by Applicants). Thus, it cannot be said that the mere disclosure of an IWF connecting to the PSTN as prior art to Hsu’s invention amounts to teaching an IWF that functions to connect “data calls of both (i) a type between a client terminal and a device in a packet-data network and (ii) a type between the client terminal

and a device in a Public Switched Telephone Network.” On the contrary, Hsu teaches away from such a configuration.

Applicants therefore submit that Hsu does not teach an IWF that functions to connect “data calls of both (i) a type between a client terminal and a device in a packet-data network and (ii) a type between the client terminal and a device in a Public Switched Telephone Network.”

**Hsu does not teach that both signaling information for setting up both types of data call and bearer data for both types of data call are transmitted over the Ethernet link that connects the interworking function with a wireless switch.**

Each of Applicants’ independent claims also recites, in one way or another, a limitation that both signaling information for setting up both types of data call and bearer data for both types of data call are transmitted over the Ethernet link that connects the interworking function with a wireless switch.

In view of the above discussion, Applicants submit that because Hsu does not teach an IWF that functions to connect “data calls of both (i) a type between a client terminal and a device in a packet-data network and (ii) a type between the client terminal and a device in a Public Switched Telephone Network,” Hsu necessarily does not teach that both signaling information for setting up both types of data call and bearer data for both types of data call are transmitted over the Ethernet link that connects the interworking function with a wireless switch. At the very least, the IWF taught by Hsu does not transmit over an Ethernet both signaling and bearer data for a data call between the client terminal and a device in a Public Switched Telephone Network.

Applicants therefore submit that Hsu does not teach that both signaling information for setting up both types of data call and bearer data for both types of data call are transmitted over

the Ethernet link that connects the interworking function with a wireless switch.

For at least the reasons discussed above, Applicants submit that Hsu fails to anticipate any of claims 1, 11, 12, 16, 26, and 29, and that these claims are therefore allowable.

Each of claims 2-10, 13-15, 17-25, 27-28, and 30-34 depend, in one way or another, from one of the independent claims (claims 1, 11, 12, 16, 26, and 29), which are allowable for at least the reasons discussed above. Applicants submit that for at least the reason that they depend from an allowable claim, claims 2-10, 13-15, 17-25, 27-28, and 30-34 are therefore allowable as well. Further, Applicants do not concede any specific assertions made by the Examiner with respect to any of claims 2-10, 13-15, 17-25, 27-28, and 30-34.

## **6. Conclusion**

Applicants submit that the application is in good and proper form for allowance and therefore respectfully request favorable reconsideration. If, in the opinion of the Examiner, a telephone conference would expedite the prosecution of this application, the Examiner is invited to call the undersigned patent agent, at 312-913-3353.

Respectfully submitted,

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